

Application No.: 09/854,674

Docket No.: 21900-00025-US

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A multi-channel video optical transmission system made to convert a multi-channel video signal into an optical signal in an optical transmitter and transmit the converted optical signal from said optical transmitter through an optical fiber to an optical receiver,

said optical transmitter comprising:

pilot signal generating means for generating a pilot signal to be superimposed on said multi-channel video signal inputted;

frequency modulating means for modulating said pilot signal superimposed multi-channel video signal into a frequency-modulated signal in batches; and

electrical-optical converting means for converting said frequency-modulated signal into an optical signal and further for putting the converted optical signal out to said optical fiber,

said optical receiver comprising:

optical-electrical converting means for receiving said optical signal transmitted through said optical fiber to convert the received optical signal into an electric frequency-modulated signal;

amplifying means for amplifying said frequency-modulated signal obtained by said optical-electrical converting means; and

frequency demodulating means for frequency-demodulating said frequency-modulated signal amplified by said amplifying means into a pilot signal superimposed multi-channel video signal,

wherein said pilot signal generating means has a frequency modulation function to modulate a frequency of said pilot signal for modulating a frequency of an intermodulation distortion occurring at frequencies corresponding to the sum of and

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difference between a frequency of each carrier of said multi-channel video signal and a frequency of said pilot signal whereby inclination angle of stripes on a display screen is varied at a high speed so that the stripes are invisible to the naked eye.

2. (Currently amended) A multi-channel video optical transmission system made to convert a multi-channel video signal into an optical signal in an optical transmitter and transmit the converted optical signal from said optical transmitter through an optical fiber to an optical receiver,

said optical transmitter comprising:

pilot signal generating means for generating a pilot signal to be superimposed on said multi-channel video signal inputted; and

electrical-optical converting means for converting said pilot signal superimposed multi-channel video signal into an optical signal and further for putting the converted optical signal out to said optical fiber,

said optical receiver comprising:

optical-electrical converting means for receiving said optical signal transmitted through said optical fiber to convert the received optical signal into an electric signal corresponding to said pilot signal superimposed multi-channel video signal; and

amplifying means for amplifying said electric signal corresponding to said pilot signal superimposed multi-channel video signal obtained by said optical-electrical converting means,

wherein said pilot signal generating means has a frequency modulation function to modulate a frequency of said pilot signal for modulating a frequency of an intermodulation distortion occurring at frequencies corresponding to the sum of and difference between a frequency of each carrier of said multi-channel video signal and a frequency of said pilot signal whereby inclination angle of stripes on a display screen is varied at a high speed so that the stripes are invisible to the naked eye.

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3. (Currently amended) An optical transmitter for use in a multi-channel video optical transmission system, which converts a multi-channel video signal into an optical signal and transmits the converted optical signal through an optical fiber to an optical receiver, said optical transmitter comprising:

pilot signal generating means for generating a pilot signal to be superimposed on said multi-channel video signal inputted;

frequency modulating means for modulating said pilot signal superimposed multi-channel video signal into a frequency-modulated signal in batches; and

electrical-optical converting means for converting said frequency-modulated signal into an optical signal and further for putting the converted optical signal out to said optical fiber, wherein said pilot signal generating means has a frequency modulation function to modulate a frequency of said pilot signal for modulating a frequency of an intermodulation distortion occurring at frequencies corresponding to the sum of and difference between a frequency of each carrier of said multi-channel video signal and a frequency of said pilot signal whereby inclination angle of stripes on a display screen is varied at a high speed so that the stripes are invisible to the naked eye.

4. (Currently amended) An optical receiver for use in a multi-channel video transmission system, which receives a multi-channel video signal, converted into an optical signal in an optical transmitter, through an optical fiber, said optical receiver comprising:

optical-electrical converting means for receiving said optical signal transmitted through said optical fiber to convert the received optical signal into an electric frequency-modulated signal, with said optical signal being produced in a manner that, at the conversion in said optical transmitter, a pilot signal is superimposed on said multi-channel video signal and a frequency of said pilot signal is modulated by a frequency modulation function of said optical transmitter for modulating a frequency of

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an intermodulation distortion occurring at frequencies corresponding to the sum of and difference between a frequency of each carrier of said multi-channel video signal and a frequency of said pilot signal;

amplifying means for amplifying said frequency-modulated signal obtained by said optical-electrical converting means; and

frequency demodulating means for frequency-demodulating said frequency-modulated signal amplified by said amplifying means into a pilot signal superimposed multi-channel video signal whereby inclination angle of stripes on a display screen is varied at a high speed so that the stripes are invisible to the naked eye.

5. (Currently amended) An optical transmitter for use in a multi-channel video optical transmission system, which converts a multi-channel video signal into an optical signal and transmits the converted optical signal through an optical fiber to an optical receiver, said optical transmitter comprising:

pilot signal generating means for generating a pilot signal to be superimposed on said multi-channel video signal inputted; and

electrical-optical converting means for converting said pilot signal superimposed multi-channel video signal into an optical signal and further for putting the converted optical signal out to said optical fiber,

wherein said pilot signal generating means has a frequency modulation function to modulate a frequency of said pilot signal for modulating a frequency of an intermodulation distortion occurring at frequencies corresponding to the sum of and difference between a frequency of each carrier of said multi-channel video signal and a frequency of said pilot signal whereby inclination angle of stripes on a display screen is varied at a high speed so that the stripes are invisible to the naked eye.

6. (Currently amended) An optical receiver for use in a multi-channel video transmission system, which receives a multi-channel video signal, converted into an

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optical signal in an optical transmitter, through an optical fiber, said optical receiver comprising:

optical-electrical converting means for receiving said optical signal transmitted through said optical fiber to convert the received optical signal into an electric signal in which a pilot signal is superimposed on the multi-channel video signal, with said optical signal being produced in a manner that a frequency of said pilot signal is modulated by a frequency modulation function of said optical transmitter for modulating a frequency of an intermodulation distortion occurring at frequencies corresponding to the sum of and difference between a frequency of each carrier of said multi-channel video signal and a frequency of said pilot signal whereby inclination angle of stripes on a display screen is varied at a high speed so that the stripes are invisible to the naked eye; and

amplifying means for amplifying said electric signal obtained by the optical-electrical converting means